RAW SEQUENCE LISTING DATE: 07/24/2002
PATENT APPLICATION: US/09/852,000A TIME: 14:17:08

Input Set : A:\soei500502.txt
Output Set: N:\CRF3\07242002\I852000A.raw

<110> APPLICANT: Osumi, Takashi
Tsukamoto, Toshiro
Tsukamoto, Noriyo
Yamasaki, Masatoshi
<120> TITLE OF INVENTION: GREEN FLUORESCENT PROTEINS AND BLUE FLUORESCENT PROTEINS
<130> FILE REFERENCE: 046124-5005-02-US
<140> CURRENT APPLICATION NUMBER: 09/852,000A
<141> CURRENT FILING DATE: 2001-05-10
<150> PRIOR APPLICATION NUMBER: 09/615,655
<151> PRIOR FILING DATE: 2000-07-13
<150> PRIOR APPLICATION NUMBER: JP 026418/1998
<151> PRIOR FILING DATE: 1998-01-23
<150> PRIOR APPLICATION NUMBER: 09/121,539
<151> PRIOR FILING DATE: 1998-07-24
<160> NUMBER OF SEQ ID NOS: 15
<170> SOFTWARE: PatentIn Ver. 2.0
<210> SEQ ID NO: 1
<211> LENGTH: 238
<212> TYPE: PRT
<213> ORGANISM: Aequorea victoria
<220> FEATURE:
<223> OTHER INFORMATION: Green fluorescent protein
<400> SEQUENCE: 1

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 1               5                  10                  15
Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
            20                  25                  30
Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
        35                  40                  45
Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
    50                  55                  60
Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
65                  70                  75                  80
His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
                85                  90                  95
Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
            100                 105                 110
Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
        115                 120                 125
Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
    130                 135                 140
Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
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RAW SEQUENCE LISTING DATE: 07/24/2002
PATENT APPLICATION: US/09/852,000A TIME: 14:17:09

Input Set : A:\soei500502.txt
Output Set: N:\CRF3\07242002\I852000A.raw

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66 145                 150                 155                 160
68 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
69                 165                 170                 175
71 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
72             180                 185                 190
74 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
75         195                 200                 205
77 Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
78     210                 215                 220
80 Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
81 225                 230                 235
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85 <211> LENGTH: 28
86 <212> TYPE: DNA
87 <213> ORGANISM: Artificial Sequence
89 <220> FEATURE:
90 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
92 <400> SEQUENCE: 2
93 tcgtgaccac cttctcccac ggcgtgca                                    28
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97 <211> LENGTH: 28
98 <212> TYPE: DNA
99 <213> ORGANISM: Artificial Sequence
101 <220> FEATURE:
102 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
104 <400> SEQUENCE: 3
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109 <211> LENGTH: 29
110 <212> TYPE: DNA
111 <213> ORGANISM: Artificial Sequence
113 <220> FEATURE:
114 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
116 <400> SEQUENCE: 4
117 gctggagtac aacttcaaca gccacaacg                                   29
120 <210> SEQ ID NO: 5
121 <211> LENGTH: 29
122 <212> TYPE: DNA
123 <213> ORGANISM: Artificial Sequence
125 <220> FEATURE:
126 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
128 <400> SEQUENCE: 5
129 cgttgtggct gttgaagttg tactccagc                                   29
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133 <211> LENGTH: 28
134 <212> TYPE: DNA
135 <213> ORGANISM: Artificial Sequence
137 <220> FEATURE:
138 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
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RAW SEQUENCE LISTING DATE: 07/24/2002
PATENT APPLICATION: US/09/852,000A TIME: 14:17:09

Input Set : A:\soei500502.txt
Output Set: N:\CRF3\07242002\I852000A.raw

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146 <212> TYPE: DNA
147 <213> ORGANISM: Artificial Sequence
149 <220> FEATURE:
150 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
152 <400> SEQUENCE: 7
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157 <211> LENGTH: 28
158 <212> TYPE: DNA
159 <213> ORGANISM: Artificial Sequence
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162 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
164 <400> SEQUENCE: 8
165 cctcgtgacc accctcacct acggcgtg                                    28
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169 <211> LENGTH: 28
170 <212> TYPE: DNA
171 <213> ORGANISM: Artificial Sequence
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176 <400> SEQUENCE: 9
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182 <212> TYPE: DNA
183 <213> ORGANISM: Artificial Sequence
185 <220> FEATURE:
186 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
188 <400> SEQUENCE: 10
189 gaacggcatc aaggccaact tcaagatcc                                    29
192 <210> SEQ ID NO: 11
193 <211> LENGTH: 29
194 <212> TYPE: DNA
195 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
200 <400> SEQUENCE: 11
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205 <211> LENGTH: 28
206 <212> TYPE: DNA
207 <213> ORGANISM: Artificial Sequence
209 <220> FEATURE:
210 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
212 <400> SEQUENCE: 12
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RAW SEQUENCE LISTING DATE: 07/24/2002
PATENT APPLICATION: US/09/852,000A TIME: 14:17:09

Input Set : A:\soei500502.txt
Output Set: N:\CRF3\07242002\I852000A.raw

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219 <213> ORGANISM: Artificial Sequence
221 <220> FEATURE:
222 <223> OTHER INFORMATION: Description of Artificial Sequence: cloning primer
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229 <211> LENGTH: 239
230 <212> TYPE: PRT
231 <213> ORGANISM: Artificial Sequence
233 <220> FEATURE:
234 <223> OTHER INFORMATION: Description of Artificial Sequence: Engineered green
235       fluorescent protein
237 <400> SEQUENCE: 14
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239   1               5                  10                  15
241 Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
242             20                  25                  30
244 Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
245         35                  40                  45
247 Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
248     50                  55                  60
250 Phe Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
251 65                  70                  75                  80
253 Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
254                 85                  90                  95
256 Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
257             100                 105                 110
259 Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
260         115                 120                 125
262 Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
263     130                 135                 140
265 Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
266 145                 150                 155                 160
268 Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
269                 165                 170                 175
271 Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
272             180                 185                 190
274 Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
275         195                 200                 205
277 Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
278     210                 215                 220
280 Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys
281 225                 230                 235
284 <210> SEQ ID NO: 15
285 <211> LENGTH: 238
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RAW SEQUENCE LISTING DATE: 07/24/2002
PATENT APPLICATION: US/09/852,000A TIME: 14:17:09

Input Set : A:\soei500502.txt
Output Set: N:\CRF3\07242002\I852000A.raw

286 <212> TYPE: PRT
287 <213> ORGANISM: Aequorea victoria
289 <220> FEATURE:
290 <223> OTHER INFORMATION: Blue Fluorescent Protein
292 <400> SEQUENCE: 15
293 Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
294 1 5 10 15
296 Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
297 20 25 30
299 Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
300 35 40 45
302 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Phe
303 50 55 60
305 Ser His Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
306 65 70 75 80
308 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
309 85 90 95
311 Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
312 100 105 110
314 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
315 115 120 125
317 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
318 130 135 140
320 Phe Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
321 145 150 155 160
323 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
324 165 170 175
326 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
327 180 185 190
329 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
330 195 200 205
332 Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
333 210 215 220
335 Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
336 225 230 235

VERIFICATION SUMMARY DATE: 07/24/2002
PATENT APPLICATION: US/09/852,000A TIME: 14:17:10

Input Set : A:\soei500502.txt
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STATISTICS SUMMARY DATE: 07/24/2002
PATENT APPLICATION: **US/09/852,000A** TIME: 14:17:10

Input Set : **A:\soei500502.txt**
Output Set: **N:\CRF3\07242002\I852000A.raw**

Application Serial Number: US/09/852,000A
Alpha or Numeric: Numeric
Application Class:
Application File Date: 05-10-2001
Art Unit: 1652
Software Application: PatentIN2.0
Total Number of Sequences: 15
Total Nucleotides: 340
Total Amino Acids: 715
Number of Errors: 0
Number of Warnings: 0
Number of Corrections: 0

MESSAGE SUMMARY